APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,322	10/12/2001	Duc Pham	AESN3000	9241

23488 . 7590 04/07/2005		EXAMINER
GERALD B ROSENBERG		ENGLAND, DAVID E
NEW TECH LAW		

ART UNIT	PAPER NUMBER
2143	

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DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/976,322	PHAM ET AL.
	Examiner	**Art Unit**	
	David E. England	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _12 October 2001_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-27_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-27_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _12 October 2001_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1 – 27 are presented for examination.

Claim Objections

2.   Claim 2 is objected to because of the following informalities: Claim 2 is missing section

(c). It is not sure if the Applicant skipped to (d) but meant (c). Appropriate correction is

required.

Drawings

3.   The drawings are objected to under 37 CFR 1.83(a). The drawings must show every

feature of the invention specified in the claims. Therefore, the "said parallel array of protocol

processors" must be shown or the feature(s) canceled from the claim(s). No new matter should

be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to

the Office action to avoid abandonment of the application. Any amended replacement drawing

sheet should include all of the figures appearing on the immediate prior version of the sheet,

even if only one figure is being amended. The figure or figure number of an amended drawing

should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure

must be removed from the replacement sheet, and where necessary, the remaining figures must

be renumbered and appropriate changes made to the brief description of the several views of the

drawings for consistency. Additional replacement sheets may be necessary to show the

renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

be notified and informed of any required corrective action in the next Office action. The

objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5.   Claims 9, 14 and 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to reasonably convey to one skilled in the

relevant art that the inventor(s), at the time the application was filed, had possession of the

claimed invention. Claims 9 and 14 recite the limitation of "said intensive data processing

function one or a combination of functions selected from a group consisting of data encryption,

decryption, compression, decompression, and protocol translation." There is no written

description in the specification that states a specific selection from a group.

6.   Claim 15 is rejected for its dependency on claim 14.

7.   Claims 21 – 27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply

with the written description requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to reasonably convey to one skilled in the relevant

art that the inventor(s), at the time the application was filed, had possession of the claimed

invention. The limitation of "said parallel array of protocol processors" is not stated in the

specification.

8.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

9.   Claim 1 and 8 – 15 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

10.   Regarding claim 1, the phrase "a like" renders the claim(s) indefinite because the claim(s)

include(s) elements not actually disclosed (those encompassed by "or the like" or "a like"),

thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

11.   Claim 8 recites the limitation "the aggregate performance". There is insufficient

antecedent basis for this limitation in the claim.

12.   Claims 9 – 15 are rejected for their dependency on claim 8.

Claim Rejections - 35 USC § 102

13.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
patent by another filed in the United States before the invention by the applicant for patent, except that an
international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
subsection of an application filed in the United States only if the international application designated the United
States and was published under Article 21(2) of such treaty in the English language.

14.   Claims 1 – 6, 8, 10 – 13, 16 – 18 and 21 – 24 are rejected under 35 U.S.C. 102(e) as

being anticipated by Almulhem et al. U.S. Patent No. 6587431 (hereinafter Almulhem).

15.   Referencing claim 1, as closely interpreted by the Examiner, Almulhem teaches a

network data processor system comprising a plurality of data packet processors coupled through

a data switch fabric between network connection processors, wherein said data packet processors

perform a data processing function over data contained within predetermined data packets,

wherein said network connection processors include network interfaces coupleable to external

data transmission networks and wherein said network connection processors provide for the

selective routing of said predetermined data packets through said data switch fabric to load

balance the processing of said predetermined data packets by said plurality of data packet

processors, (e.g., col. 7, lines 10 – 44 & col. 8, lines 30 – 39).

16.   Referencing claim 2, as closely interpreted by the Examiner, Almulhem teaches a

network data packet processor system providing for the transfer of packets between first and

second networks, said network data packet processor system comprising:

17.   a) a data packet switch including pluralities of first and second data ports coupled

together to provide for the transfer of network data packets between respective first and second

data ports, (e.g., col. 7, lines 10 – 44);

18.   b) a plurality of data protocol processors coupled to a like plurality of said first data ports

of said data packet switch, each data protocol processor being coupled to a respective first data

port through a bidirectional packet transfer interface and including a protocol processing engine

providing for the selective conversion of data contained within a predetermined network data

packet, (e.g., col. 7, lines 10 – 44); and

19.   b) input and output data transfer processors coupled to respective second data ports of ·

said data packet switch, wherein said input data transfer processor selectively routes network

data packets from said first network to said plurality of data protocol processors and said output

data transfer processor routes network data packets from said plurality of protocol processors to

said second network, and wherein said input data transfer processor balances the load of

individual network data packets routed to said plurality of data protocol processors, (e.g., col. 7,

lines 10 – 44 & col. 8, lines 30 – 39).

20.   Referencing claim 3, as closely interpreted by the Examiner, Almulhem teaches a

network gateway processor comprising:

21.   a) a switch providing data routing between input, output, and processing ports, (e.g. col. 8, lines 40 – 44, *"rotator space switch"*);

22.   b) an array of protocol processors coupled to respective processing ports, each said protocol processor providing for the conversion of network data packets from a first form to a second form, (e.g., col. 7, lines 10 – 44 & col. 8, lines 30 – 39);

23.   c) an input processor coupled between a first network and said input port, said input processor providing for the load balanced allocation of network data packets received from said first network to said array of protocol processors, (e.g., col. 7, lines 10 – 44 & col. 8, lines 30 – 39); and

24.   d) an output processor coupled between a second network and said output port, wherein said array of protocol processors provide network data packets of said second form to said output processor for transfer to said second network, (e.g., col. 7, lines 10 – 44 & col. 8, lines 30 – 39).

25.   Referencing claim 4, as closely interpreted by the Examiner, Almulhem teaches said input processor selectively associates conversion control data with network data packets provided to said array of protocol processors, (e.g., col. 7, lines 10 – 44 & col. 8, lines 30 – 39).

26.   Referencing claim 5, as closely interpreted by the Examiner, Almulhem teaches said conversion control data is provided with each network data packet provided to said array of protocol processors, (e.g., col. 7, lines 10 – 44 & col. 8, lines 30 – 39).

27.   Referencing claim 6, as closely interpreted by the Examiner, Almulhem teaches each said

protocol processor includes a data form conversion engine and wherein operation of said data

form conversion engine is defined by predetermined parameters identified by said conversion

control data and wherein said predetermined parameters are applied to said data form conversion

engine with respect to a corresponding network data packet, (e.g., col. 7, lines 10 – 44 & col. 8,

lines 30 – 39).

28.   Referencing claim 8, as closely interpreted by the Examiner, Almulhem teaches a method

of operating a network gateway coupleable between first and second networks to implement a

compute intensive data processing function on network data packets transferred between said

first and second networks, said method comprising:

29.   a) receiving, by a first processor coupleable to said first network, network data packets,

(e.g., col. 7, lines 22 – 55);

30.   b) selecting, from said received network data packets, predetermined network packets for

routing through said network gateway, (e.g., col. 7, lines 22 – 55);

31.   c) selectively distributing said predetermined network data packets to a plurality of

second processors so as to enable utilization of the aggregate performance of said second

processors in performing said compute intensive data processing function, (e.g., col. 7, lines 22 –

55 & col. 8, lines 30 – 39);

32.   d) processing, asynchronously, said predetermined network data packets as distributed

by said plurality of second processors to convert each of said predetermined network data

packets in accordance with said compute intensive data processing function to provide converted

network data packets, (e.g., col. 8, lines 8 – 29);

33.   e) collecting, by a third processor coupleable to said second network, said converted

network data packets, (e.g., col. 7, lines 22 – 55 & col. 8, lines 30 – 39); and

34.   f) transferring said converted network data packets to said second network, (e.g., col. 8,

lines 45 – 59).

35.   Referencing claim 10, as closely interpreted by the Examiner, Almulhem teaches said

compute intensive data processing function is dependent on configuration parameters and

wherein said method further comprising the steps of;

36.   a) obtaining said configuration parameters, (e.g., col. 8; lines 8 – 30); and

37.   b) applying said configuration parameters, within said step of processing, to control the

conversion of each of said predetermined network data packets, (e.g., col. 8, lines 8 – 39,

"configured policy").

38.   Referencing claim 11, as closely interpreted by the Examiner, Almulhem teaches said

step of obtaining includes negotiating, by a fourth processor, a set of configuration parameters

for a predetermined logical connection established through said network gateway between said

first and second networks and wherein said step of applying includes selecting said set of

configuration parameters with respect to a predetermined network packet associated with said

predetermined logical connection, (e.g., col. 8, lines 8 – 39, "configured policy").

39.   Referencing claim 12, as closely interpreted by the Examiner, Almulhem teaches

40.   a) distributing, by said fourth processor to said first processor, said set of configuration

parameters, (e.g., col. 8, lines 8 – 39, *"configured policy"*); and

41.   b) associating, by said first processor, said set of configuration parameters with said

predetermined network packet such that said set of configuration parameters is passed, in

combination with said predetermine network packet by said step of selectively distributing, to a

predetermined one of said plurality of second processors, (e.g., col. 8, lines 40 – 59).

42.   Referencing claim 13, as closely interpreted by the Examiner, Almulhem teaches

43.   a) distributing, by said fourth processor to said second processors, said set of

configuration parameters, (e.g., col. 8, lines 8 – 39, *"configured policy"*); and

44.   b) associating, by a predetermined one of said second processors, said set of

configuration parameters with said predetermined network packet as passed by said step of

selectively distributing, to said predetermined one of said plurality of second processors, (e.g.,

col. 7, lines 23 – 44 & col. 8, lines 40 – 59).

45.   Claims 16 – 18 and 21 – 24 are rejected for similar reasons as stated above.   .

Claim Rejections - 35 USC § 103

46.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
such that the subject matter as a whole would have been obvious at the time the invention was made to a person
having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
manner in which the invention was made.

47.   Claims 7, 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Almulhem as applied to claims 1 – 6, 8 and 10 – 12 above, and in view of Arrow et al. (6226751)

(hereinafter Arrow).

48.   As per claim 7, as closely interpreted by the Examiner, Almulhem does not specifically

teach said data form conversion engine includes an encryption engine. Arrow teaches said data

form conversion engine includes an encryption engine, (e.g., col. 10, lines 21 – 31). It would

have been obvious to one of ordinary skill in the art, at the time the invention was conceived,

combine Arrow with Almulhem because a strong encryption scheme can essentially guarantees

privacy.

49.   As per claim 9, as closely interpreted by the Examiner, Almulhem teaches said compute

intensive data processing function one or a combination of functions consisting of protocol

translation, (e.g., col. 7, lines 23 – 44). Almulhem does not specifically teach said compute

intensive data processing function one or a combination of functions selected from a group

consisting of data encryption, decryption, compression and decompression. Arrow teaches said

compute intensive data processing function one or a combination of functions selected from a

group consisting of data encryption, decryption, compression and decompression, (e.g., col. 10,

lines 21 – 31). It would have been obvious to one of ordinary skill in the art, at the time the

invention was conceived, to combine Arrow with Almulhem because of similar reasons stated

above, furthermore utilizing compression formats requires less space than sending data

uncompressed.

50.   Claim 14 is rejected for similar reasons as stated above.

51.   Claims 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Almulhem and

Arrow as applied to claims 8, 10 – 12 and 14 above, and in view of Booth, III et al. (6668282)

(hereinafter Booth).

52.   As per claim 15, as closely interpreted by the Examiner, Almulhem and Arrow do not

specifically teach said compute intensive data processing function implements a conversion

between an IP protocol and an IPsec protocol. Booth teaches said compute intensive data

processing function implements a conversion between an IP protocol and an IPsec protocol,

(e.g., col. 2, lines 25 – 45). It would have been obvious to one of ordinary skill in the art, at the

time the invention was conceived, to combine Booth with the combine system of Almulhem and

Arrow because a big advantage of IPSec is that security arrangements could be handled without

requiring changes to individual user computers.

53.   Claims 19, 20 and 25 – 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Almulhem as applied to claims 16 – 18 and 21 above, and in view of Booth.

54.   As per claim 19, as closely interpreted by the Examiner, Almulhem does not specifically

teach said protocol transformation is an implementation of a secure IP protocol. Booth teaches

said protocol transformation is an implementation of a secure IP protocol, (e.g., col. 2, lines 25 –

45). It would have been obvious to one of ordinary skill in the art, at the time the invention was

conceived, to combine Booth with Almulhem because of similar reasons stated above.

55.   As per claim 20 as closely interpreted by the Examiner, Almulhem does not specifically

teach said logical connection is a virtual private network and wherein said protocol

transformation implements a conversion between an IP protocol and an IPsec protocol. Booth

teaches said logical connection is a virtual private network and wherein said protocol

transformation implements a conversion between an IP protocol and an IPsec protocol, (e.g., col.

2, lines 25 – 45). It would have been obvious to one of ordinary skill in the art, at the time the

invention was conceived, to combine Booth with Almulhem because of similar reasons stated

above.

56.   As per claim 26, as closely interpreted by the Examiner, Almulhem teaches said control

processor is coupled through said switch fabric to transfer said protocol processing parameters to

a data table stored by said ingress processor, wherein said ingress processor dynamically attaches

headers selectively containing said protocol processing parameters to data packets prior to

transfer to said parallel array of protocol processors, the selection of said protocol processing

parameters being dependent on information contained in respective data packets, (e.g., col. 9,

lines 22 – 58).

57.   Claims 25 and 27 are rejected for similar reasons as stated above.

Conclusion

58.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

59.   a.   Bendinelli et al. U.S. Patent No. 6631416 discloses Methods and systems for

enabling a tunnel between two computers on a network.

60.   b.   Weldon et al. U.S. Patent No. 6366563 discloses Method, computer program

product, and apparatus for collecting service level agreement statistics in a communication

network.

61.   c.   Boudreau et al. U.S. Patent No. 6788692 discloses Network switch load

balancing.

62.   d.   Cheesman et al. U.S. Patent No. 6680933 discloses Telecommunications switches

and methods for their operation.

63.   e.   Rajakarunanayake U.S. Patent No. 6765881 discloses Virtual L2TP/VPN tunnel

network and spanning tree-based method for discovery of L2TP/VPN tunnels and other layer-2

services.

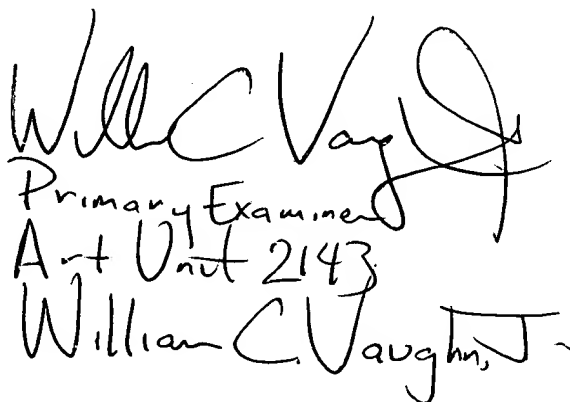Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. England whose telephone number is 571-272-3912. The examiner can normally be reached on Mon-Thur, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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De

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